

Light is OSRAM



OTi DALI DIM 1-4CH D

Constant Voltage LED dimmer

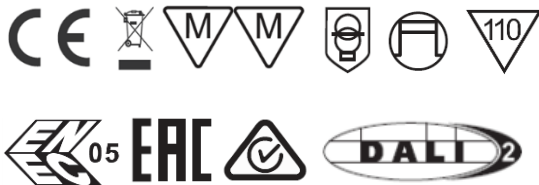
Benefits

- Specifically designed flex LED tapes and signage modules
- Class II design for a wide range of application
- High power handling on 4 channels
- 1 to 4 channel output with DALI-2 certification
- DT6 and DT8 operations through DIP switch selection

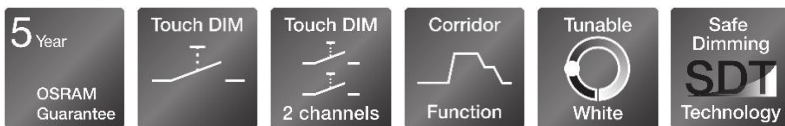
Applications

- Hospitality – decorative lighting, night light, dynamic lighting
- Restaurants – decorative lighting
- Shops – decorative lighting, shelf lighting
- Residential – cove lighting, cabinet lighting

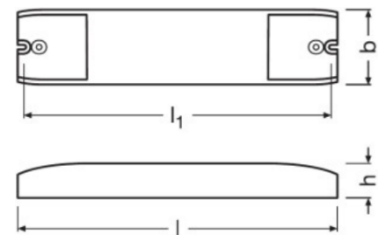
Approvals



Valid only if printed on product.
When not printed on product label, they are under evaluation.



Housing material: plastic, white
* image for information purpose only



L	181 mm	Total length
L2	175.5 mm	Holes interaxis
B	42 mm	Width
H	20 mm	Height

Product Features

- 12-48 V SELV output constant voltage range
- Output power up to 240 W
- Total power handling allowed on CH1
- Overload/Over temperature/Short circuit protection, automatic, reversible
- 50.000h at t_c max = 60°C
- *10% cumulated failure
- Screw terminals and integrated cable clamps
- Suitable for Class I & II luminaires (EMI immunity for class I).
- Wide t_a range -25 ... +50°C
- DT6 or DT8 selection through DIP switch
- Touch DIM compatibility
- 5 years guarantee*

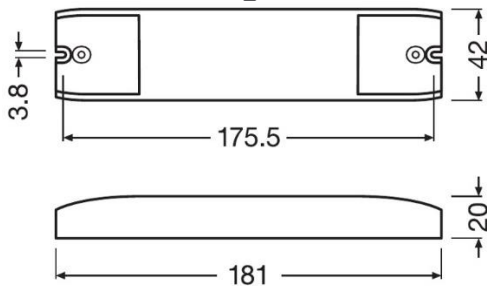
Electrical specification

Item	Value	Unit	Remarks					
INPUT	Nominal supply voltage	12 – 48	V _{DC}					
	Supply voltage range	11 – 50	V _{DC}					
	Supply input current	11	A	12 – 24 V, max				
		6	A	48 V, max				
	Power loss in no-load condition	≤0.5	W	Secondary switching is not allowed				
	Standby power	≤0.5	W					
	Protection class	II						
Suitable for fixtures with prot. Class	I & II		EMI immunity for class I.					
OUTPUT	Output load range (per channel)	Channel	DT6 (max)			DT8 (max)		
			12 V	24 V	48 V	12 V	24 V	48 V
		CH1	120 W	240 W	240 W	60 W	120 W	120 W
		CH2	60 W	120 W	120 W	60 W	120 W	120 W
		CH3	60 W	120 W	120 W	60 W	120 W	120 W
		CH4	60 W	120 W	120 W	60 W	120 W	120 W
		All	120 W	240 W	240 W	120 W	240 W	240 W
	Output current (per channel)	Channel	Current (max)					
			DT6			DT8		
		CH1	10 A			5 A		
		CH2	5 A			5 A		
		CH3	5 A			5 A		
		CH4	5 A			5 A		
		All	10 A			10 A		
	DT6 / DT8 options	Type	DT6			DT8		
		DIP1	ON	DT6 function		OFF	DT8 function	
		DIP2 / DIP3	ON / ON	CH1		N.A.	CH1 = CH3 = WW, CH2 = CH4 = CW	
			OFF / ON	CH1, CH2				
			ON / OFF	CH1, CH2, CH3				
		DIP4	OFF / OFF	CH1, CH2, CH3, CH4				
ON			Touch DIM		ON	Touch DIM		
OFF	Corridor		OFF	Corridor				
Min load per channel	20	W	Min load that doesn't trigger open circuit detection					
Capacitive load	1	µF/A						
DIMMING	Dimming interface	DALI-2						
	Dimming range	0,1 ... 100	%	DALI dimming steps (0 ... 254), logarithmic curve				
	Dimming method	PWM						
	PWM frequency	3	kHz					
	Fade time / Fade rate				Fade Time		Fade rate	
		DALI default			0.2 s		44.7 steps/s	
		Touch Dim			Fade on: 0.5 s	Fade off: 0.5 s	N.A.	
		Corridor			Fade on: 0.5 s	Fade off: 0.5 s	N.A.	
	Power on behaviour in Touch DIM mode	Last level		Default mode				
	Sensor function	Yes, in combination with OSRAM Touch DIM sensor and normal PIR corridor sensors; sensor should be powered by other mains						
	TW control with push buttons	Allowed, refer to below connection diagram and user instructions						
Interface overvoltage	Rated voltage: 220-240 V _{ac} , 50/60 Hz DALI interface is protected: 198-264 Vac, surge ≤ 1000 V							
Galvanic insulation	DA/Input, DA/Output: reinforced insulation							

ENVIRONMENTAL	Ambient temperature range	-25...+50	°C	
	Max. temperature at t _c test point	60	°C	At t _c point of the product label, t _a not exceeded
	Max case temperature in fault condition	110	°C	
	Storage temperature range	-40...+85	°C	
	Permitted rel. humidity during operation	5 – 85	%	Not condensing
	Surge capability (DA/DA)	1	kV	acc to. EN 61547
	Environmental rating	Indoor		
	IP protection class	IP 20		
	Mains switching cycles	> 100000	cycles	@ t _a = 25°C
	Expected ECG lifetime	50000	h	t _c = 60°C and 10% failure rate,
	Overheating protection	Yes		Auto reversible
	Overload protection	Yes		Auto reversible
	Short-circuit protection	Yes		Auto reversible
	No load proof	Yes		Secondary switching is not allowed
	DALI interface polarity	No		DALI cables can be connected without observing polarity
	Type of connection	screw terminals		
	Dimensions	181x42x20	mm	L x W x H
	Holes interaxis	175.5	mm	
	Weight	100	g	
Casing material	Plastic		White RAL9010	

Note: All parameters are measured at 12-48V input, full load and 25°C of ambient temperature.

Product drawing



12-48 V_{DC}

IN+ / IN- / OFF ↔ ON

1 2 3 4

DALI IN / Push-DIM

DA TOUCH DIM / DA SENSOR

OPTOTRONIC® INTELLIGENT
OTi DALI DIM 1-4CH D
 PWM LED Dimmer 240W

DIP1	ON: DT6	OFF: DT8	U _{IN}	P _{OUT(max)}
			12V	120W
			24V	240W
			48V	240W

Output CH1 CH1-2 CH1-3 CH1-4

DIP4 ON: Touch DIM OFF: Corridor

OSRAM GmbH
 Berliner Allee 65
 86153 Augsburg
 Germany
 www.osram.com

wire preparation 0,5-2,5mm² 5-8mm

LED+ / LED- / CH1- / SELV / CH2- / CH3- / CH4-

COMM (+) / COMM (-) / CH1 (-) / CH2 (-) / CH3 (-) / CH4 (-)

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INPUT	Terminals	Screw terminals		
	Wire peeling length	5 - 8	mm	
	Cable cross section	0.5 - 2.5	mm ²	Recommended cables for DC input: H05RN-F/2x1.0 mm ² H07RN-F/2x1.5 mm ² H03VV-F2x0,75 mm ² NYM 3x1,5 mm ² Recommended cables for DALI: NYM 3x1,5 mm ² H03VV-F2x0,75 mm ²
OUTPUT	Terminals	Screw terminals		1 LED+ / 1 LED-
	Wire peeling length	5 - 8	mm	
	Cable cross section	0.5 - 2.5	mm ²	2 poles for V (+), 4 poles for V (-) Recommended cables: NYM 3x1,5 mm ² H03VV-F2x0,75 mm ²

Led wire length

EMI pass verified with wire length below 3.0 m without consideration of ECG as system, only verified dimmer together with LED module, from the dimmer to the LED module at full load.

Wiring longer than 3.0 m from ECG to LED module is possible, but site installation conditions may interfere with EMI with these longer cables. EMI is therefore not verified in this condition based on matching constant voltage driver.

For longer lengths than 3.0 m, appropriate cable cross section must be carefully selected to reduce voltage drop. The cables must be dimensioned correctly, and they should be isolated from every wiring or parts at voltage not SELV. It is suggested to use double insulated shielded and twisted cables.

Specifically, for 24 V applications, table below suggests the proper wire section for each cable length to ensure that the LED module input voltage is at least 23 V.

Vout 24V	Cable length [m]								
	AWG	mm2	5	10	20	30	40	50	
Cable section	20	0.5	133	67	33	22	17	13	
	18	0.75	196	98	49	33	24	20	
	17	1	240	133	66	44	33	27	
	16	1.5	240	198	99	66	50	40	
	14	2.5	240	240	162	108	81	65	
	12	4	240	240	240	174	130	104	
	10	6	240	240	240	240	195	156	
8	10	240	240	240	240	240	240		

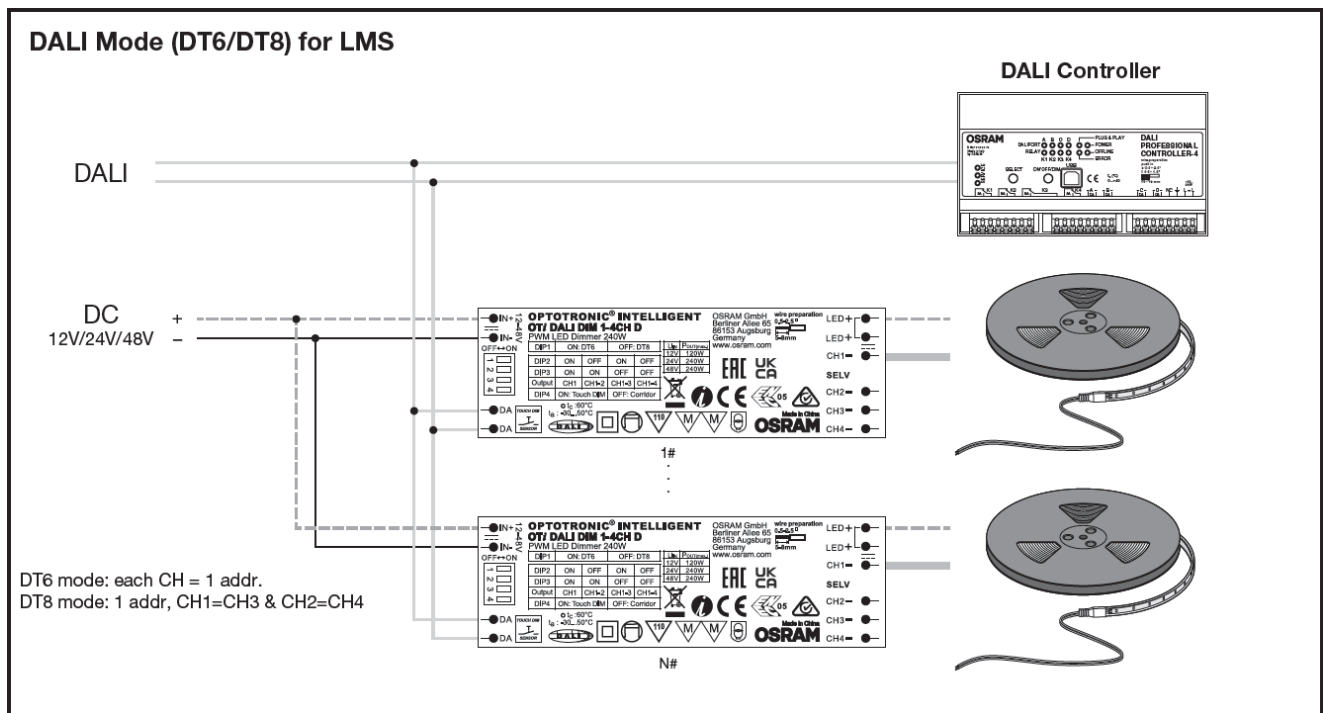
Values are indicative at ta 25°C. Each connection may increase total voltage drop.

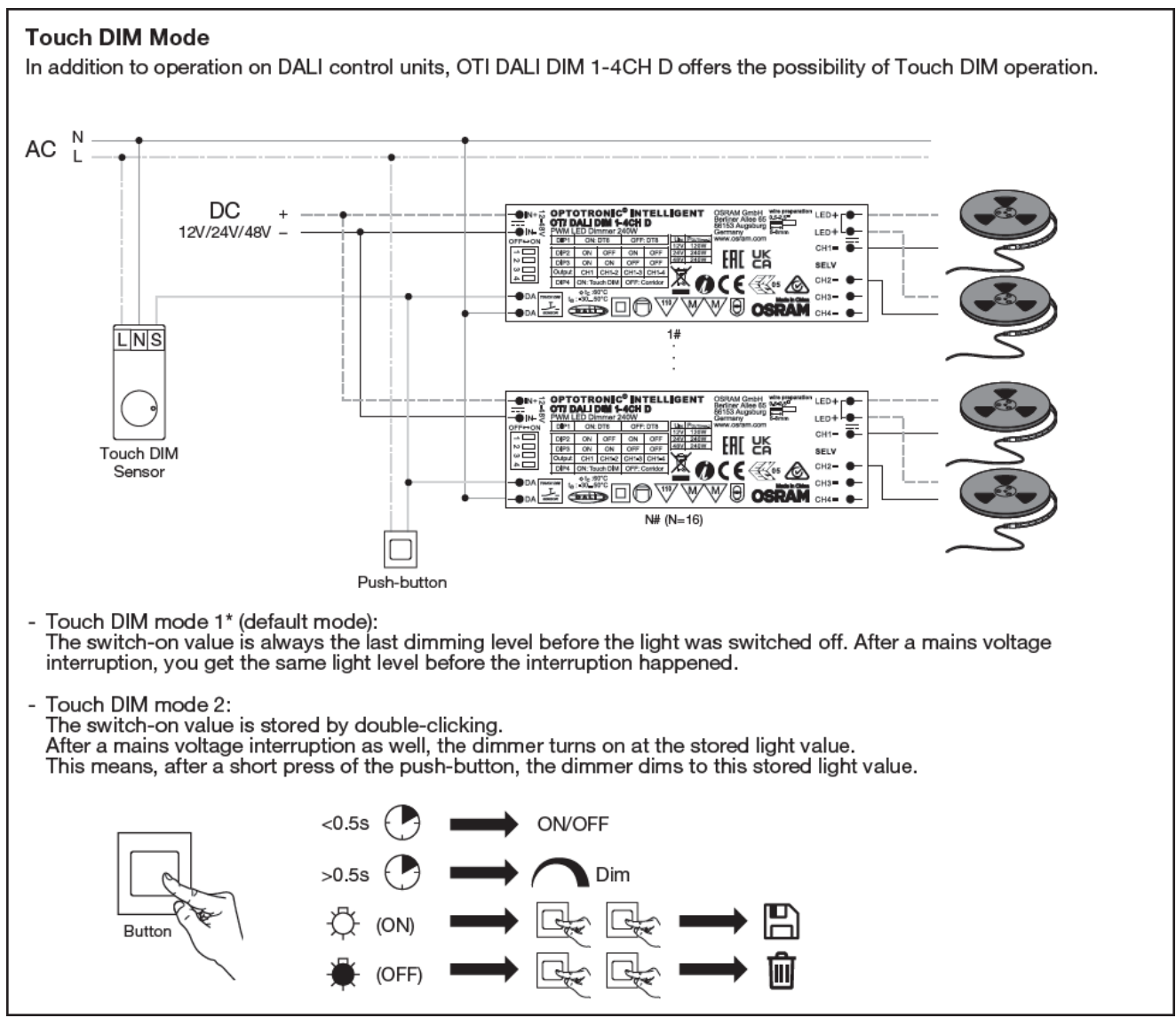
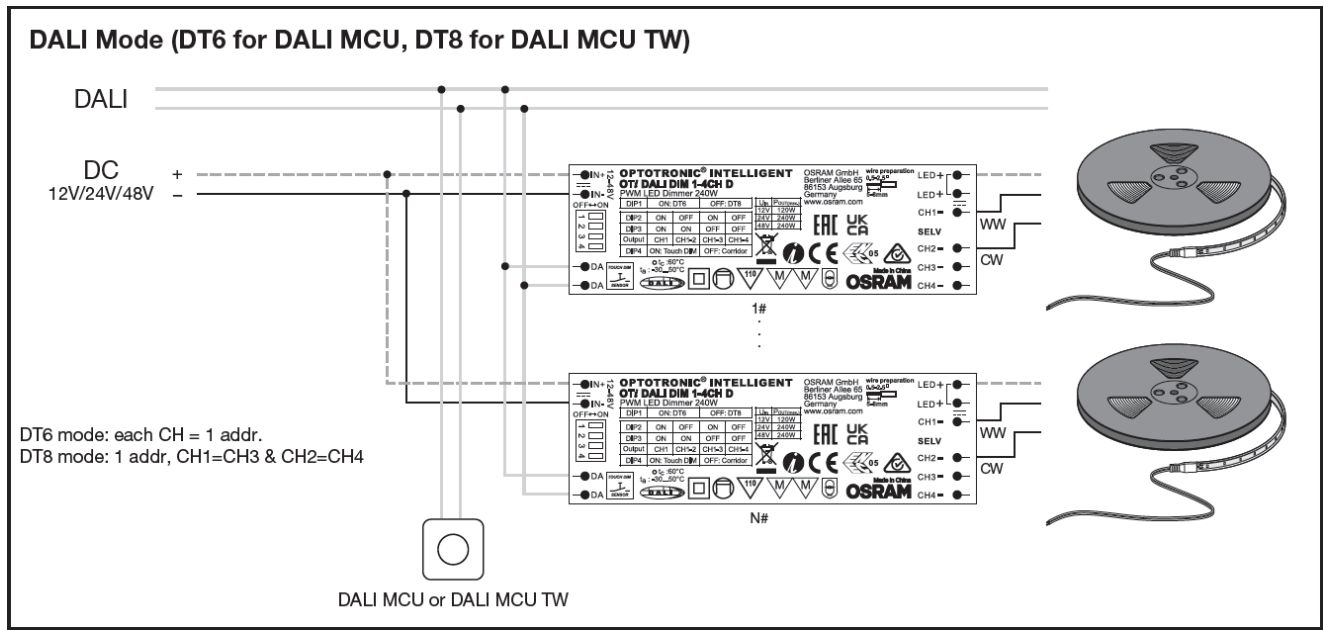
Protection

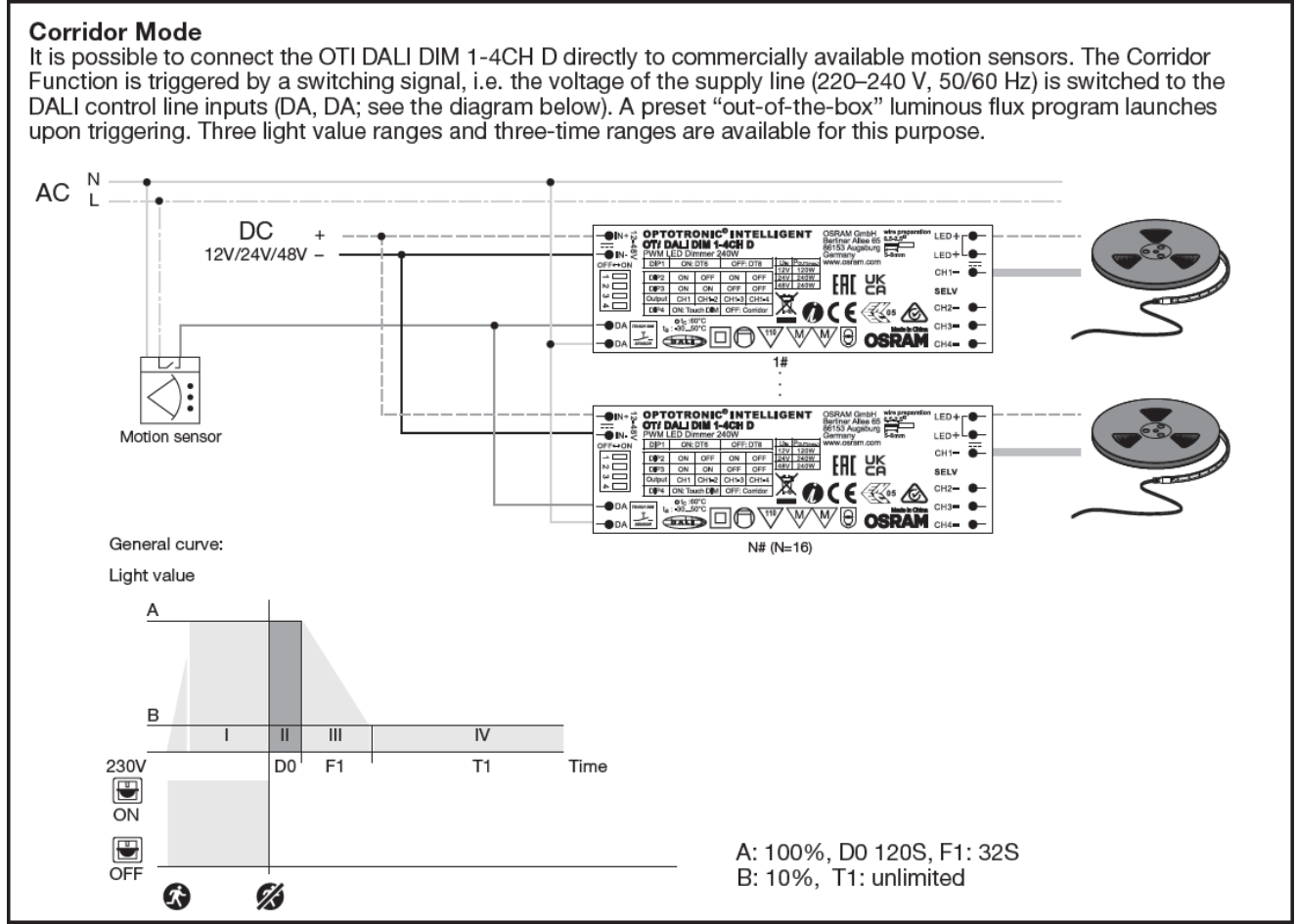
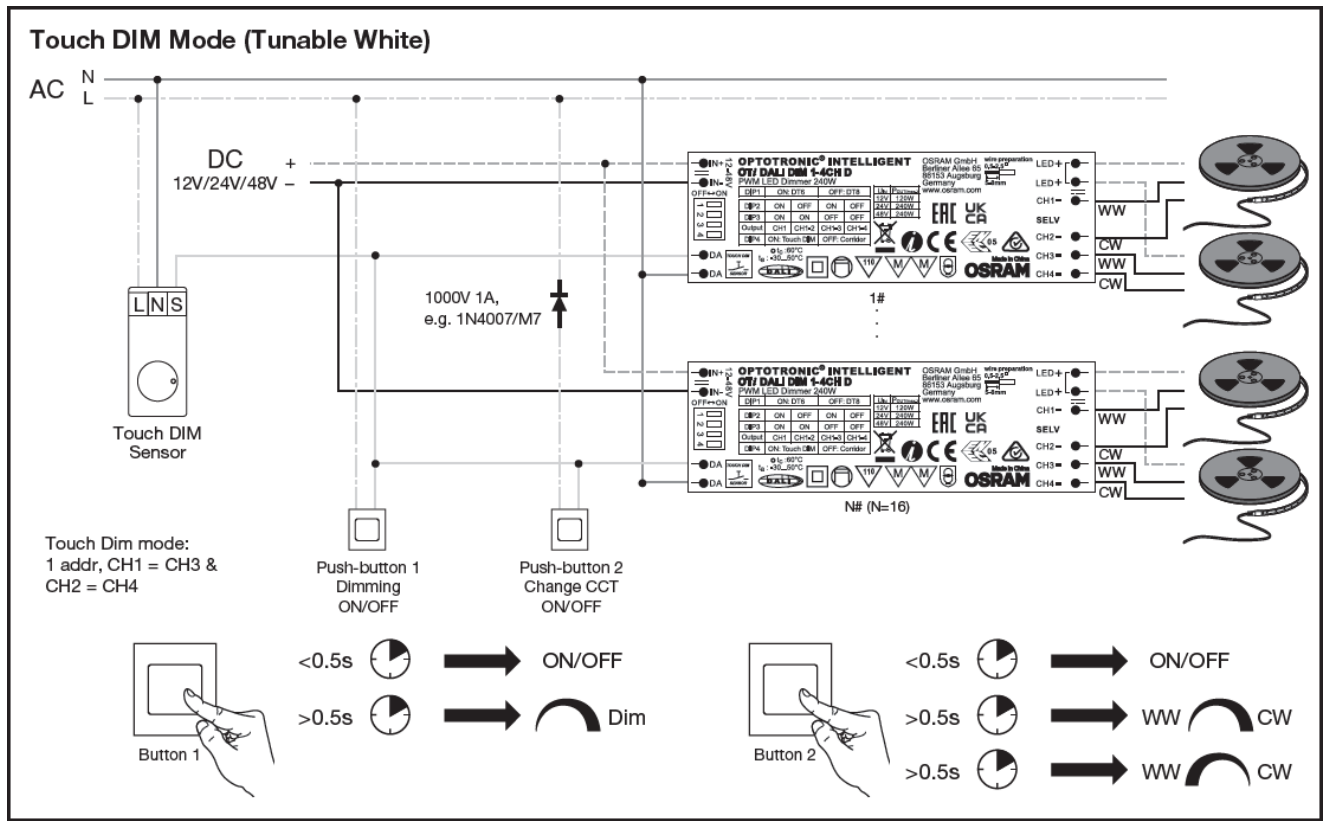
Over temperature, Overload, Short-circuit. Auto reversible.

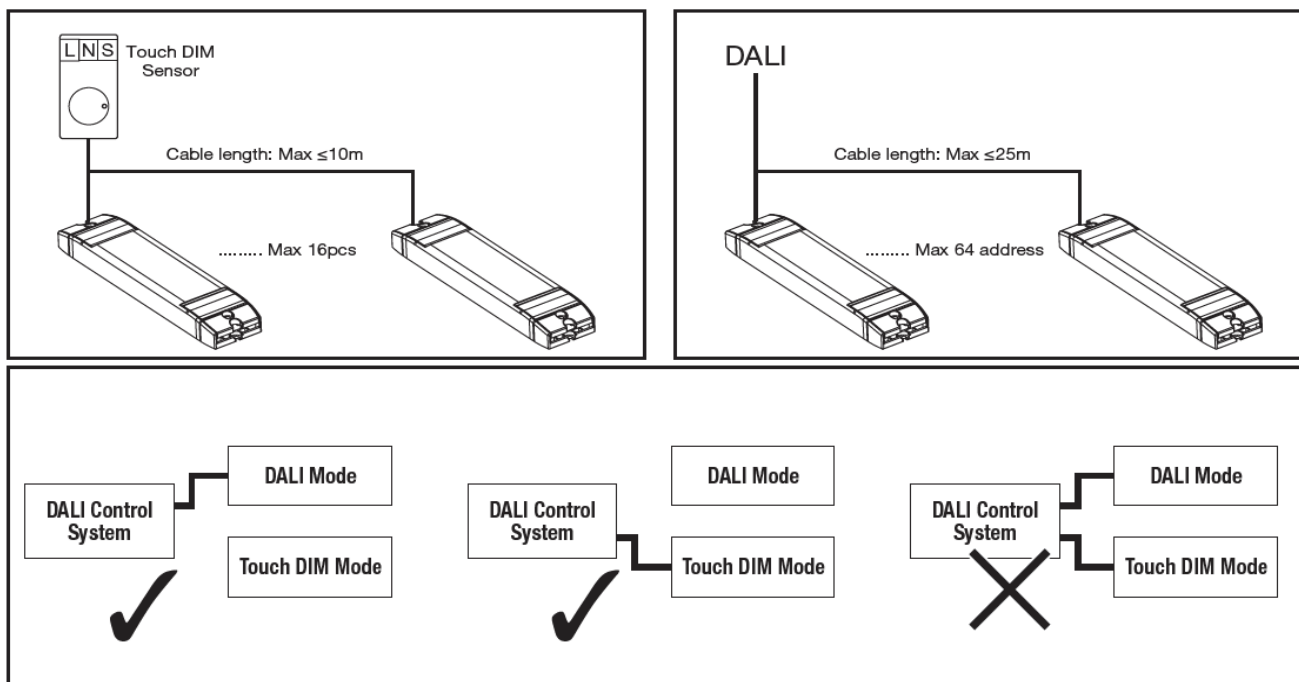
Installation and connection diagrams

It is recommended to use only ON/OFF type constant voltage LED power supplies as input source.









Remarks

- **Output short circuit protection:** auto reversible when fault removed
- **Output overload protection:** auto reversible when fault removed
- **Over temperature protection:** the unit is protected against temporary overheating by shutting the unit down, auto reversible when temperature decreases
- **Application*:** the dimmer is intended to manage 12 V, 24 V or 48 V LED light sources like – but not limited to – OSRAM LINEARlight FLEX®, Tec Flex LED flexible strips, GinoLED Flex LED flexible strips, Value Flex LED flexible strips, OSRAM BackLED® and BoxLED® modules, OSRAM LINEARlight® Rigid FINESSE systems.
* It is recommended to use only ON/OFF type constant voltage LED power supplies as input source..
- **No-load conditions:** hot plug-in or secondary switching of LEDs is not permitted.
- Intended for use with LED modules.
- The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable.
- **Ecodesign regulation information:**
Intended for use with LED modules. The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable. Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

Standards

EN 61347-1
EN 61347-2-13
EN 55015
EN 61547
EN 60598-1
EN 62384
CISPR 15

Ordering information

Product name	EAN 10	EAN 40	Pieces / Shipping carton
OT DALI DIM 1-4CH D	4062172166010	4062172166027	20

OSRAM GmbH

Head Office:
Marcel-Breuer-Strasse 6
80807 Munich, Germany
Phone +49 89 6213-0
www.osram.com

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